


SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket No. 00786/350010		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		Serial No.		Not yet assigned		
		Applicant		Jack W. Szostak et al.		
		Filing Date		January 26, 2004		
		Group				
(37 C.F.R. §1.98(b))		IDS Filed		January 26, 2004		
U.S. PATENTS						
Examiner's Initials	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date (If Appropriate)
BF	5,432,018	07/11/95	Dower et al.			
	5,639,603	06/17/97	Dower et al.			
	5,541,061	07/30/96	Fodor et al.			
	5,270,163	12/14/93	Gold et al.			
	5,795,747	08/18/98	Henco et al.			
	5,264,563	11/23/93	Huse			
	5,723,323	03/03/98	Kauffman et al.			
	5,643,768	07/01/97	Kawasaki			
	5,658,754	08/19/97	Kawasaki			
	5,223,409	06/29/93	Ladner et al.			
	4,587,044	05/06/86	Miller et al.			
	5,270,170	12/14/93	Schatz et al.			
	5,498,530	03/12/96	Schatz et al.			
	5,605,793	02/25/97	Stemmer			
	5,733,731	03/31/98	Schatz et al.			
	5,627,024	05/06/97	Maruyama et al.			
	5,789,024	08/04/98	Sharon			
	5,985,575	11/16/99	Wickens			
	5,849,878	12/15/98	Cantor et al.			
	5,965,133	10/12/99	Cantor et al.			
↓	5,843,701	12/01/98	Gold et al.			
EXAMINER /Betty Forman/			DATE CONSIDERED 09/05/2006			
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Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
BF	WO 91/05058	04/18/91	PCT			
	WO 92/18645	10/29/92	PCT			
	WO 98/58080	12/23/98	PCT			
	WO 98/16636	04/23/98	PCT			
	WO 93/03172	02/18/93	PCT			
	WO 92/02536	02/20/92	PCT			
	DE 19646372	11/09/96	Germany			
	WO 98/37186	08/27/98	PCT			
	WO 95/11922	05/04/95	PCT			
↓	WO 96/22391	07/25/96	PCT			
OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PLACE OF PUBLICATION)						
BF	Abelson, "Directed Evolution of Nucleic Acids by Independent Replication and Selection," Science 249:488-489 (1990).					
	Barrett et al., "A Monoclonal Antibody Specific for a Dynorphin Precursor," Neuropeptides 6:113-120 (1985).					
	Botstein et al., "Strategies and Applications of in Vitro Mutagenesis," Science 229:1193-1201 (1985).					
	Bujard et al., "[26] A T5 Promoter-Based Transcription-Translation System for the Analysis of Proteins in Vitro and in Vivo," Methods in Enzymology 155:416-433 (1987).					
	Clackson et al., "In Vitro Selection from Protein and Peptide Libraries," Tibtech 12:173-184 (1994).					
	Devlin et al., "Random Peptide Libraries: A Source of Specific Protein Binding Molecules," Science 249:404-406 (1990).					
	Eigen et al., "Molecular Quasi-Species," Journal of Physical Chemistry 92:6881-6891 (1988).					
↓	Eigen et al., "The Hypercycle. Coupling of RNA and Protein Biosynthesis in the Infection Cycle of an RNA Bacteriophage," Biochemistry 30:11005-11018 (1991).					
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BF	Eigen, "Viral Quasispecies," Scientific American 269:32-39 (1993).				
	Eigen, "New Concepts for Dealing with the Evolution of Nucleic Acids," Cold Spring Harb. Symp. Quant. Biol. 52:307-320 (1987).				
	Eigen et al., "Evolutionary Molecular Engineering Based on RNA Replication," Pure & Appl. Chem. 56(8):967-978 (1984).				
	Gersuk et al., "High-Affinity Peptide Ligands to Prostate-Specific Antigen Identified by Polysome Selection," Biochem. Biophys. Res. Commun. 232(2):578-582 (1997).				
	Geysen et al., "Use of Peptide Synthesis to Probe Viral Antigens for Epitopes to a Resolution of a Single Amino Acid," Proc. Natl. Acad. Sci. 81:3998-4002 (1984).				
	Guatelli et al., "Isothermal, in vitro Amplification of Nucleic Acids by a Multienzyme Reaction Modeled after Retroviral Replication," Proc. Natl. Acad. Sci. 87:1874-1878 (1990).				
	Higuchi, "Using PCR to Engineer DNA," In: PCR Technology Principles and Applications for DNA Amplification, Henry A. Erlich, ed., Stockton Press, pp. 61-70 (1989).				
	Horwitz et al., "Selection of New Biological Activities from Random Nucleotide Sequences: Evolutionary and Practical Considerations," Genome 31:112-117 (1989).				
	Hui et al., "Mutagenesis of the Three Bases Preceding the Start Codon of the B-galactosidase mRNA and its Effect on Translation in Escherichia coli," The EMBO Journal 3:623-629 (1984).				
	Hunkapiller et al., "A Microchemical Facility for the Analysis and Synthesis of Genes and Proteins," Nature 310:105-111 (1984).				
	Jamieson et al., "In Vitro Selection of Zinc Fingers with Altered DNA-Binding Specificity," Biochemistry 33:5689-5695 (1994).				
	Nemoto et al., "In vitro virus: Bonding of mRNA bearing puromycin at the 3' -terminal end to the C-terminal end of its encoded protein on the ribosome in vitro," FEBS 414:405-408 (1997).				
	Nielsen et al., "Synthetic Methods for the Implementation of Encoded Combinatorial Chemistry," J. Am. Chem. Soc. 115:9812-9813 (1993).				
	Oehlenschlaeger et al., "30 Years Later—A New Approach to Sol Spiegelman's and Leslie Orgel's in vitro Evolutionary Studies. Dedicated to Leslie Orgel on the Occasion of his 70 th birthday," Orig. Life. Evol. Biosph. 27:437-457 (1997).				
	Ohno, "Birth of a Unique Enzyme from an Alternative Reading Frame of the Preexisted, Internally Repetitious Coding Sequence," Proc. Natl. Acad. Sci. 81:2421-2425 (1984).				
	Oldenburg et al., "Peptide Ligands for a Sugar-Binding Protein Isolated from a Random Peptide library," Proc. Natl. Acad. Sci. 89:5393-5397 (1992).				
✓	Payvar et al., "Improvements in Immunoprecipitation of Specific Messenger RNA Isolation of Highly Purified Conalbumin mRNA in High Yield," Eur. J. Biochem. 101:271-282 (1979).				
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BF	Peters et al., "N-terminal Amino Acid Sequences and C-terminal Residues of Rat Alpha-fetoprotein Electrophoretic Variants, 'Fast' and 'Slow'," Scand. J. Immunol 8:299-304 (1978).				
	Rebar et al., "Zinc Finger Phage: Affinity Selection of Fingers with New DNA-Binding Specificities," Science 263:671-673 (1994).				
	Sarkar et al., "Characterization of Polymerase Chain Reaction Amplification of Specific Alleles," Analytical Biochemistry 186:64-68 (1990).				
	Schatz, "Use of Peptide Libraries to Map the Substrate Specificity of a Peptide-Modifying Enzyme: A 13 Residue Consensus Peptide Specifies Biotinylation in Escherichia coli," Bio/Technology 11:1138-1143 (1993).				
	Scott et al., "Searching for Peptide Ligands with an Epitope Library," Science 249:386-390 (1990).				
	Scott et al., "A Family of Concanavalin A-Binding Peptides from a Hexapeptide Epitope Library," Proc. Natl. Acad. Sci. 89:5398-5402 (1992).				
	Wells et al., "Cassette Mutagenesis: An Efficient Method for Generation of Multiple Mutations at Defined Sites," Gene 34:315-323 (1985).				
	Ellington and Szostak, Nature 346:818-822 (1990);				
	Ellington and Szostak, Nature 355:850-852 (1992);				
	Tuerk and Gold, Science 249:505-510 (1990);				
	Irvine et al., J. Mol. Biol. 222:739-761 (1991);				
	Oliphant et al., Mol. Cell Biol. 9:2944-2949 (1989);				
	Blackwell et al., Science 250:1104-1110 (1990);				
	Pollock and Treisman, Nuc. Acids Res. 18:6197-6204 (1990);				
	Thiesen and Bach, Nuc. Acids Res. 18:3203-3209 (1990);				
	Bartel et al., Cell 67:529-536 (1991);				
	Stormo and Yoshioka, Proc. Natl. Acad. Sci. USA 88:5699-5703 (1991);				
	Bock et al., Nature 355:564-566 (1992);				
	Green et al., Nature 347:406-408 (1990);				
	Robertson and Joyce, Nature 344:467-468 (1990);				
▼	Beudry and Joyce, Science 257:635-641 (1992);				
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BF	Bartel and Szostak, Science 261:1411-1418 (1993);			
	Lorsch and Szostak, Nature 371:31-36 (1994);			
	Cuenoud and Szostak, Nature 375:611-614 (1995);			
	Chapman and Szostak, Chemistry and Biology 2:325-333 (1995);			
	Lohse and Szostak, Nature 381:442-444 (1996);			
	Ellman et al., Meth. Enzymol. 202:301-336 (1991);			
	Milstein, Sci. Amer. 243:66-74 (1980);			
	Smith, Science 228:1315-1317 (1985);			
	Parmley and Smith, Gene 73:305-318 (1988);			
	McCafferty et al., Nature 348:552-554 (1990);			
	Cull et al., Proc. Natl. Acad. Sci. USA 89:1865-1869 (1992);			
	Korman et al., Proc. Natl. Acad. Sci. USA 79:1844-1848 (1982);			
	Mattheakis et al., Proc. Natl. Acad. Sci. USA 91:9022-9026 (1994);			
	Mattheakis et al., Meth. Enzymol. 267:195-205 (1996);			
	Hanes and Pluckhun, Proc. Natl. Acad. Sci. USA 94:4937-4942 (1997);			
	Brenner and Lerner, Proc. Natl. Acad. Sci. USA 89:5381-5383 (1992);			
	Traut and Monro, J. Mol. Biol. 10:63-72 (1964);			
	Smith et al., J. Mol. Biol. 13:617-628 (1965);			
	Ekland et al., Nucl. Acids Research 23:3231-3238 (1995);			
	Stemmer, Nature 370: 389-391 (1994);			
	Fraser and Rich, Proc. Natl. Acad. Sci. USA 70:2671-2675 (1973);			
	Krayevsky and Kukhanova, Progress in Nucleic Acids Research and Molecular Biology 23:1-51 (1979);			
	Roberts and Szostak, Proc. Natl. Acad. Sci. USA 94:12297-12302 (1997);			
	Roberts, "In Vitro selection of proteins via RNA-proteins fusions," FY 95, Abstract;			
	Roberts, "In Vitro selection of proteins via RNA-proteins fusions," FY 96, Abstract.			
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BF	6,440, 695	08/27/02	Merryman et al.	/	/	
FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION						
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
BF	EP 0 962 527 A1	08.12.99	Europe	/	/	
	DE 196 46 373 C1	09.11.96	Germany	non-English language document		
BF	WO 96/22391	07/25/96	PCT	/	/	
BF	WO 95/11922	05/04/95	PCT	/	/	
BF	WO 93/03172	02/18/93	PCT	/	/	
BF	WO 92/02536	02/20/92	PCT	/	/	
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BF	Husimi et al., Role of the Virus-Type Strategy in Encoded Molecular Evolution, Progress in Biophysics and Molecular Biology, Vol. 65 (Supp. 1), Abstract P-A5-04 (1996).					
	Niemeyer et al., Oligonucleotide-Directed Self-Assembly of Proteins: Semisynthetic DNA - Streptavidin Hybrid Molecules as Connectors for the Generation of Macroscopic Arrays and the Construction of Supramolecular Bioconjugates, Nucl. Acid Res. 22:5530-5539 (1994).					
	Fraser et al., "Determination of Aminoacylation Isomeric Specificity Using tRNA Terminating in 3'-Amino-3'-deoxyadenosine and 2'-Amino-2'-deoxyadenosine," <i>Methods in Enzymology</i> 59:272-283 (1979).					
	Fraser and Rich, "The Preparation of tRNA Terminating in 3'-Amino-3'-deoxyadenosine and 2'-Amino-2'-deoxyadenosine," <i>Methods in Enzymology</i> 59:134-145 (1979).					
	Nemoto et al., "A Model of the Virus-Type Strategy in the Early Stage of Encoded Molecular Evolution," <i>J. Theor. Biol.</i> 176:67-77 (1995).					
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PTO/SB/08a/b (07-05)

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet	1	of	1
Attorney Docket Number COTH-P08-701			

Complete If Known

Application Number	10/764799
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First Named Inventor	Jack W. Szostak
Art Unit	1652
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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (# known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

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BF	BA	WO 98 31700 A	07-23-1998	GEN HOSPITAL CORP		

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NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
BF	CA	Liu, R., et al., "Optimized Synthesis of RNA-Protein Fusions for in Vitro Protein Selection", Methods in Enzymology, 318: 268-293 (2000)	

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